LISTING

<110> Tuszynski, George Williams, Taffy Actor, Paul

<120> RETROINVERSO POLYPEPTIDE PARENT MIMIC OR INHIBIT THROMBOSPONDIN ACTIVITY

<130> 07206-0021

<140> 09/197,770

<141> 1998-11-23

<160> 40

<170> PatentIn Ver. 2.0

<210> 1

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic or human fragment/ analog of thrombospondin

<400> 1

Cys Ser Val Thr Cys Gly 1

<210> 2

<211> 9

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: synthetic fragment/ analog of thrombospondin

<400> 2

Trp Ser Pro Cys Ser Val Thr Cys Gly

<210> 3

<211> 11

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: synthetic fragment/ analog of thrombospondin

<223> Xaal is hydrogen, amino, acetyl or at least one amino acid residue or the desamino form thereof;

Xaa2 is a neutral/non-polar/large/cyclic amino acid residue;

Xaa3 is a neutral/polar/small or neutral/polar/large/non-cyclic or acidic amino acid residue;



2 Xaa4 is a neutral/nonpolar/large/cyclic or neutral/non-polar/large/noncyclic or neutral/polar/large/non-cyclic or neutral/polar/small amino acid residue; Xaa5 is a neutral/polar/small amino acid residue; Xaa6 is a neutral/polar/small or neutral/polar/large/non-cyclic amino acid residue; Xaa7 is a neutral/nonpolar/large/non-cyclic or neutral/polar/large/noncyclic amino acid residue; Xaa8 is a neutral/polar/large/non-cyclic or neutral/polar/small amino acid residue; Xaa9 is a neutral/polar/small amino acid residue; XaalO is a neutral/polar/small amino acid residue; Xaall is hydroxyl, carboxyl, non-amino acids such as agmatine, or at least one amino acid residue, including carboxyamide or alkylamide forms thereof. <400> 3 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa <210> 4 <211> 7 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: synthetic fragment/ analog of thrombospondin <220> <223> Xaal is a protected or unprotected terminal amino group, including hydrogen, amino, acetyl or at least one amino acid residue or the desamino form thereof; Xaa3-5 are the same or different neutral/non-polar/large/non-cyclic or neutral/polar/large/non-cyclic or neutral/polar/small or basic/non-cyclic amino acid residues, preferably selected from the group consisting of valine, threonine, serine, and arginine; Maa7 is a protected or unprotected terminal carboxyl group including hydroxyl, carboxyl, or at least one amino acid residue, including carboxyamide or alkylamide forms thereof, preferably selected from the group consisting of lysine, glycine, and arginine. <400> 4 Xaa Cys Xaa Xaa Xaa Cys Xaa <210> 5 <211> 6 <212> PRT <213> Artificial Sequence <220> <023> Description of Artificial Sequence: synthetic fragment/ analog of thrombospondin

<400> 5 Gly Cys Thr Val Ser Cys <210> 6 <211> 6

```
3
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: synthetic
       fragment/ analog of thrombospondin
 <220>
 <223> Cys at positions 1 & 5 are blocked with (ACM)
 <400> 6
 Cys Ser Val Thr Cys Gly
  1 5
<210> 7
 <211> 6
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: synthetic
       fragment/ analog of thrombospondin
 <400> 7
 Val Cys Thr Gly Ser Cys
 <210> 8
 <211> 4
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: synthetic
       fragment/ analog of thrombospondin
 <400> 8
 Val Thr Cys Gly
  1
 <210> 9
 <211> 6
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: synthetic
       fragment/ analog of thrombospondin
 <400> 9
 Cys Ser Thr Ser Cys Gly
 <210> 10
 <211> 9
 <212> PRT
 <213> Artificial Sequence
```

4

```
<223> Description of Artificial Sequence: synthetic
      fragment/ analog of thrombospondin
Trp Asp Ile Cys Ser Val Thr Cys Gly
<210> 11
<211> 9
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: synthetic
      fragment/ analog of thrombospondin
<400> 11
Trp Ser Ser Cys Ser Val Thr Cys Gly
<210> 12
<211> 9
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: synthetic
      fragment/ analog of thrombospondin
<400> 12
Trp Thr Ser Cys Ser Thr Ser Cys Gly
<210> 13
<211> 23
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: synthetic
       fragment/ analog of thrombospondin
<400> 13
Trp Ser Pro Trp Ser Glu Trp Thr Ser Cys Ser Thr Ser Cys Gly Asn
                                                           15
Gly Ile Gln Gln Arg Gly Arg
              20
<210> 14
 <211> 23
 <212> PRT
 <213> Artificial Sequence
 <220>
```





<223> Description of Artificial Sequence: synthetic fragment/ analog of thrombospondin

Gly Val Ile Thr Arg Ile Arg
20

<210> 15

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic fragment/ analog of thrombospondin

<400> 15

Trp Gly Pro Trp Ser Pro Trp Asp Ile Cys Ser Val Thr Cys Gly Gly
1 5 10 15

Gly Val Gln Lys Arg Ser Arg 20

<210> 16

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic fragment/ analog of thrombospondin

<400> 16

Trp Ser Pro Cys Ser Val Thr Cys Ser

<210> 17

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic fragment/ analog of thrombospondin

<400> 17

Trp Ser Gln Cys Ser Val Thr Cys Gly

<110> 18

<211> 9

<212> PRT

<213> Artificial Sequence

6

```
<220>
 <223> Description of Artificial Sequence: synthetic
       fragment/ analog of thrombospondin
 Trp Ser Gln Cys Asn Val Thr Cys Gly
 <210> 19
 <211> 9
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: synthetic
       fragment/ analog of thrombospondin
 <400> 19
 Trp Thr Pro Cys Ser Val Thr Cys Gly
. <210> 20
 <211> 59
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: synthetic
       fragment/ analog of thrombospondin
 <400> 20
 Asp Gly Gly Trp Ser His Trp Ser Pro Trp Ser Ser Ser Val Thr Cys
                                                           15
 Gly Asp Giy Val Ile Thr Arg Ile Arg Leu Cys Asn Ser Pro Ser Pro
 Gln Met Asn Gly Lys Pro Cys Glu Gly Glu Ala Arg Glu Thr Lys Ala
 Cys Lys Lys Asp Ala Cys Pro Ile Asn Gly Gly
 <310> 21
 <211> 6
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: synthetic
       fragment/ analog of thrombospondin
 <220>
 <223> disulfide linked
 <400> 21
 Cys Ser Val Thr Cys Gly
```



```
<210> 22
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: synthetic
      fragment/ analog of thrombospondin
<220>
<223> disulfide linked
<400> 22
Cys Ser Thr Ser Cys Gly
<210> 23
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: synthetic
      fragment/ analog of thrombospondin
<220>
<223> blocked Cys residues
<400> 23
Cys Ser Thr Ser Cys Gly
  1
<210> 24
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: synthetic
      fragment/ analog of thrombospondin
<400> 24
Cys Arg Val Thr Cys Gly
<210> 25
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: synthetic
      fragment/ analog of thrombospondin
<220>
<223> disulfide linked
```

4

~

```
<400> 25
Cys Arg Val Thr Cys Gly
<210> 26
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: synthetic
      fragment/ analog of thrombospondin
<220>
<223> disulfide linked
<400> 26
Arg Cys Arg Val Thr Cys Gly
<210> 27
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: synthetic
      fragment/ analog of thrombospondin
<400> 27
Cys Ser Val Thr Cys Lys
<210> 28
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: synthetic
      fragment/ analog of thrombospondin
<400> 28
Cys Ser Val Thr Cys Arg
<210> 29
<211> 6
<212> PRT
<113> Artificial Sequence
<220>
<223> Description of Artificial Sequence: synthetic
     fragment/ analog of thrombospondin
```

<400> 29 Cys Ser Arg Thr Cys Gly <210> 30 <211>.6 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: synthetic fragment/ analog of thrombospondin <220> <223> disulfide linked <400> 30 Cys Arg Val Thr Cys Gly 5 1 <210> 31 <211> 6 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: synthetic fragment/ analog of thrombospondin <400> 31 Cys Arg Thr Ser Cys Gly <210> 32 <211> 6 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: synthetic fragment/ analog of thrombospondin <400> 32 Cys Ser Thr Ser Cys Arg <210> 33

<210> 55
<211> 5
<212> PRT
<213> Artificial Sequence

<220> <223> Description of Artificial Sequence: syntheti

<223> Description of Artificial Sequence: synthetic
 fragment/ analog of thrombospondin



```
<400> 33
Cys Arg Val Thr Cys
  1
<210> 34
<211> 5
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: synthetic
      fragment/ analog of thrombospondin
<400> 34
Cys Ser Thr Ser Cys
<210> 35
<211> 6
<212> PRT
<213> Artificial Sequence
<223> Description of Artificial Sequence: synthetic
      fragment/ analog of thrombospondin
<223> Cys at positions 2 & 6 are blocked with (ACM)
<400> 35
Gly Cys Thr Val Ser Cys
<210> 36
<211> 5
<212> PRT
<213> Artificial Sequence
 <223> Description of Artificial Sequence: synthetic
       fragment/ analog of thrombospondin
 <400> 36
 Gly Arg Gly Asp Ser
 <210> 37
 <211> 7
 <212> PRT
<213> Artificial Sequence
 <223> Description of Artificial Sequence: synthetic
       fragment/ analog of thrombospondin
 <223> Cys at positions 2 & 6 are blocked with (ACM)
```